

ICSE Class 9 Physics Important Questions

1. Calculate the number of seconds in a year. Take 1 year = 365 days.
2. Calculate the frequency of oscillation of Second's pendulum. Does it depend upon amplitude of oscillation?
3. Under what condition, the balance is in equilibrium?
4. Ratio of the velocities of two bodies thrown in upward direction is 2:5. Prove that the ratio of their height attained will be $h_1:h_2 = 4:25$.
5. Name two greenhouse gases. Will these gases increase or decrease the average temperature of the earth?
6. What will be the effect on the focal length of a spherical mirror if it is placed in water?
7. Oxygen gas freezes at -362°F . What will be its value on Celsius scale?
8. A person is standing on ice at a place A in a frozen pond. He has a pistol and two bullets. How can he move from place A to another distant place B and stop there?
9. The walls of a barber shop are covered with a plane mirror and two movie films are made - one recording the movements of the barber and the other of his mirror image. From viewing the films later, can an observer differentiate between the object and the image?
10. A ray of light is incident on a plane mirror at an angle of incidence of 50° . What is the angle (i) of reflection (ii) between the incident ray and the mirror (iii) between the reflected ray and the mirror (iv) of deviation (angle between the directions of the incident ray and the reflected ray)?
11. Define pitch of a screw gauge.
12. The thimble of a screw gauge has 50 divisions for one revolution. The spindle advances 1 mm when the screw is turned through two revolutions. What is the least count of the screw gauge? When the screw gauge is used to measure the diameter of the wire, the reading on the sleeve is found to be 0.05 cm and the reading on the thimble is found to be 27 divisions. What is the diameter of the wire in CGS unit?
13. Ram throws a stone in the pond. It displaced 1.5 kg of water. Calculate the buoyant force acting on the stone. ($g = 9.8 \text{ m/s}^2$)
14. A glass slab of dimensions 10 cm x 10 cm x 4 cm and weight 8 N rests with its sides 10cm x 10 cm in contact with the top of the table. Calculate the pressure exerted. If the slab is tilted and

allowed to rest on the surface on side $10\text{ cm} \times 4\text{ cm}$, will the pressure increase, decrease or remain the same?

15. A ray of light AB is inclined on a plane mirror M₁M₂ at an angle of 70° from the mirror. The mirror turns through an angle of 10° in the clockwise direction. Draw the ray diagram showing the new reflected ray and determine the angle between the incident ray and the final reflected ray.
16. If you hold a concave mirror in your hand and direct the reflected sunlight continuously on a piece of paper,
 - a. What will you observe after sometime?
 - b. Can you perform this activity with a convex mirror?
 - c. What is the relation between the radius of curvature and the focal length of this mirror?
17. Write any two uses of convex mirrors.
18. Define wave motion. Give its characteristics.
19. What do you mean by a freezing mixture? Explain.
20. Write two differences between renewable and non-renewable resources.